Control Number: TAC-16-37329

JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION

1. Contracting Activity: Department of Veterans Affairs (VA)
Office of Acquisition Operations
Technology Acquisition Center
23 Christopher Way
Eatontown, NJ 07724

2. Description of Action: The proposed action is for a firm-fixed price contract, issued on a sole source basis for research and development services of a Digital Health Platform (DHP) proof of concept from Georgia Technology Research Corporation (GTRC) a cooperative organization of the Georgia Institute of Technology (GT), a unit of the Board of Regents of the University System of Georgia, located at 505 10th Street, Atlanta, GA 30318.

3. Description of Supplies or Services: VA requires essential research and development services for a DHP Proof of Concept that will assist VA in determining the feasibility of using a cloud Infrastructure to leverage Advanced Algorithm-as-a-Service for Clinical Decision Support at the point of care using industry best practices and emerging trends. VA recently discovered that GT's Interoperability and Integration Innovation Lab (I3L) is further advanced than any other academic institution in the following research areas: Fast Healthcare Interoperability Resources (FHIR, pronounced "fire") server, major exchange of FHIR Resources, and an epilepsy algorithm. Specifically, GT is the only academic institution that has developed a FHIR server including an Observational Medical Outcomes Partnership (OMOP) common data model (CDM) database. The goal of this effort is to test and optimize the design of a future-proof DHP which will modernize VA's healthcare delivery system to allow VA to provide the next generation of care for the benefit of the Veteran. The period of performance shall be August 1, 2016 through January 31, 2017.

4. Statutory Authority: The statutory authority is 41 U.S.C. 3304(a)(3) as implemented by FAR 6.302-3, Industrial Mobilization; Engineering, Developmental, or Research Capability; or Expert Services. FAR 6.302-3(a)(2)(ii) provides that full and open competition need not be provided when it is necessary to award the contract to a particular source or sources in order to establish or maintain an essential engineering, research, or development capability to be provided by an educational or other nonprofit institution or a federally funded research and development center.

5. Rationale Supporting Use of Authority Cited Above: The proposed source is GTRC, an educational institution. VA requires unbiased research and development services to accelerate the essential development of a DHP that is able to scale and manage the Information Technology demands of an organization as large, diverse and geographically dispersed as VA. VA identified primary characteristics of GTRC's

research and development capability, which, along with their I3L, make GTRC a unique source capable of rapidly testing some of the core components of the DHP in a proof of concept demonstration. GTRC offers the following essential research and development capabilities that no other source can provide that are critical in establishing VA's DHP Proof of Concept:

- The ability to provide accelerated research and development, and testing capability of the potential configurations of the DHP through their plug and play FHIR server. GTRC is the earliest implementer of the FHIR standards through several proofs of concepts that are fielded in ambulatory and acute care practice sites which gives deep experience in this research field.

- The ability to set up the rapid demonstration of the interoperability template for use in the DHP.

Additionally, GTRC has the ability to rapidly integrate related technologies that are applicable to the following scenarios:

- Internet of Things (IoT) connected devices with clinical systems. The I3L incubates and works with startups as well as industry leaders in creating testing grounds for the complex interoperability among these types of devices and clinical systems.

- GT also has created algorithms for use in the treatment of epilepsy that fits one of the clinical scenarios in which VA requires research. Development of such solutions requires years of developing training data sets to create reliable, predictive analytics.

- Development Instance of the Market Agnostic Cloud Electronic Health Record (EHR) Component, which shall provide connectivity testing of various third party demonstration components including Clinical Decision Support, IoT devices such as sensors, monitors and wearables, other Software-as-a-Service components, and external databases.

The aforementioned scenarios are critical components to the DHP which are essential in meeting VA's needs. If VA does not obtain this research and development VA will not be able to provide Veterans an optimal DHP which provides Veterans with essential healthcare.

6. Efforts to Obtain Competition: Market research was conducted, details of which are in the market research section of this document. This effort did not yield any additional

sources that can meet the Government's requirements. There is no competition anticipated for this acquisition.

7. Actions to Increase Competition: During the period of performance various concepts and components of the DHP will be tested to determine if further investment of time and resources by VA is warranted. The following areas will be tested: scale of the current FHIR servers to a cloud infrastructure, connection with other components including an EHR, analytics engine and Customer Relationship Manager, addition of new technologies utilizing a cloud Application Program Interface (API) platform, and interoperability with other government agencies specifically the Department of Defense. If the proof of concept is shown to be viable, VA will explore future acquisitions on a competitive basis to further develop the DHP.

8. Market Research: The Government's technical experts performed market research in July 2016 by conducting a search for sources that can provide the aforementioned services. The technical experts reviewed a number of academic institutions and commercial firms based on their capabilities as it relates to the Government's requirement as follows. Specifically, VA technical experts reviewed the capabilities of John Hopkins University, Massachusetts Institute of Technology, and Oregon Health and Sciences University. Based on the review of these academic institutions, VA determined that none of them meet VA's requirements as outlined in section five of this justification. In summary, VA's technical experts determined that none of the academic institutions, except GTRC could fulfill VA's requirement for an agnostic based FHIR framework at this time.

9. Other Facts: None.